

A PERSPECTIVE ON MEXICAN ETHNOBOTANY

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ABSTRACT.—The following commentary represents a personal view of some aspects of ethnobotanical research in Mexico that may help to better understand its present orientation. In addition, C. Earle Smith Jr.'s contribution to Mexican ethnobotany is considered. The current focus of Mexican ethnobotanical research is seen as the result of increasing politization and developing social consciousness among investigators, and is largely directed towards applied research which seeks to directly benefit needy sectors of society as well as the scientific community.

RESUMEN.—Este comentario representa un punto de vista personal hacia algunos aspectos de la investigación etnobotánica en México, lo cual permite una mayor comprensión de su orientación. Además, se considera la contribución de C. Earle Smith, Jr. a la etnobotánica mexicana. El enfoque actual de la etnobotánica en México está visto como una consecuencia del aumento en la politización y el desarrollo de mayor conciencia social por parte de los investigadores, y dirigidas hacia la investigación aplicada, la cual, a su vez, propone beneficiar a los sectores más necesitados de la sociedad además de la comunidad científica.

RESUME.—Ce commentaire représente un point de vue personnel sur quelques aspects de la recherche ethnobotanique au Mexique, ce qui permet une compréhension de sa orientation. En plus, on adresse la contribution de C. Earle Smith, Jr. à l'ethnobotanique mexicaine. On voit la mise au point de la recherche ethnobotanique mexicaine comme un effet de l'accroissement de la politisation et le développement d'une conscience sociale en augmentation de la part des chercheurs. Elle est dirigée vers la recherche appliquée, que propose améliorer les secteurs les plus manguant de la société, en dehors de la communauté scientifique.

INTRODUCTION

The goals of ethnobotanical research vary in different national contexts, and investigators are not always aware of the circumstances that have contributed toward the development of this discipline in other countries. The following commentary represents a personal view of some aspects of Mexican ethnobotany that may help to place its present focus in a broader perspective. In keeping with the dedication of this number of the *Journal of Ethnobiology* to the memory of C. Earle Smith, Jr., his contribution to the development of Mexican ethnobotany is considered. Although his participation was largely indirect, in collaboration with projects sponsored by North American institutions and in training some of the paleoethnobotanists currently doing research, his work represents an important component of ethnobotanical research in Mexico.

It is beyond the scope of these comments to present a historically oriented summary of the development of ethnobotany since its initial definition at the close of the 19th century (Harshberger 1896) through the first half of the 20th century (Castetter 1944; Jones 1941; Maldonado-Koerdell 1940; Schultes 1941), when basic concepts and directions for research were established. A detailed treatment of this time period is provided by Ford (1978).

In spite of the recognized importance of some of the ecological aspects of the interaction between human groups and vegetation (Kroeber 1939), it was during the 1960s, at the height of the impact of cultural ecology in North American anthropology, that a concern for the relationships between man and plants became evident. Three areas of anthropologically-oriented ethnobotanical research grew rapidly during this period: paleoethnobotany (recovery, identification and interpretation of archaeological plant remains); ethnoscience (the study of indigenous taxonomic nomenclature with a goal toward elucidation of the cognitive principles of classification); and ecological anthropology (including ethnographic studies which explored the relationships among human populations and their exploitation of the natural environment). From a botanical point of view, these approaches all share certain methodological characteristics insofar as the collection of data is concerned, but differ with respect to the interpretation of accumulated information. For the most part, ethnobotanical studies during the 1960s and 1970s were largely synthetic, descriptive summaries of the data obtained from field studies.

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Although it was during the 20th century when the term "ethnobotany" came to be applied to a specific field of research, the study of plant use is deeply rooted in tradition, as indicated by 16th century and later Colonial period descriptions of plant use and the beliefs which surrounded them. The best known examples are the works of Sahagún (Florentine Codex: Dibble and Anderson 1963; Estrada L. *et al.* 1988), Martín de la Cruz (Badianus Manuscript: Emmart 1940; De La Cruz 1964; see also Miranda and Valdés 1964) and Francisco Hernández (1943, 1959; see also Valdés and Flores 1985).

There continues to be some confusion over the distinction between ethnobotany and economic botany, in theory and practice (see Gómez-Pompa 1982, 1986), and it might be argued that the only clear difference between them in Mexican research is in the application of results and not in the research techniques employed. Certainly ethnobotany places a greater emphasis on the role of plants in a society, including attitudes and ideology that surround them as well as their uses, whereas economic botany tends more toward documenting uses and potential applications.

It should be mentioned that the majority of Mexican ethnobotanists have been trained as biologists rather than anthropologists. In general, most of the ethnobotanical studies carried out in Mexico before 1970 were descriptive in nature. Botanical as well as anthropological literature up until that point generally lacks any discussion concerning the definition and application of specific concepts of ethnobotany. One exception is Maldonado-Koerdell (1940), who explicitly

stressed the need for ethnobiological studies which go beyond the classification of data in terms of western botanical or zoological nomenclature, to study biological elements as a function of the human group and associated cultural complex of which they are a part. However, he himself expressed the opinion that ethnobiology was of an essentially synthetic character. Other notable exceptions include the analyses and interpretations of ethnohistorical documents of Martín del Campo (1938, 1940, 1941) and the ethnographic observations of Hernández X. (1985, 1987) during the 1940s, 1950s and early 1960s.

The publication of *Exploración Etnobotánica y su Metodología* by Hernández X. (1970) marked the beginning of the decade during which ethnobotany in Mexico experienced its strongest development. While the relatively brief text contributes nothing new to the definition of ethnobotany (which is, in fact, relegated to a short footnote), the concept is strikingly different from previous descriptions of indigenous or mestizo plant use. Through a series of anecdotes based on field experiences in diverse areas of Latin America, it is possible for the reader to be both observer and participant. The third world farmer is portrayed in a completely different light than in many earlier studies and is shown to be far more sophisticated in knowledge and experience and far more observant of nature than the administrators and scientific advisors of the farming systems of industrialized nations.

In chronological terms, the growth of ethnobotany seems to coincide with the impact of ethnoscience and the approach to ethnobiology implicit in that area of anthropological inquiry. However, the ethnoscientific approach never achieved great popularity among Mexican investigators. The impact of human ecology and, to some extent, cultural ecology, is much more evident. Numerous published works appeared in which theoretical, ideological issues as well as ethnobotanical research results were reported (Bárcenas *et al.* 1982; Díaz 1976a, 1976b; Lozoya 1976; Viesca 1976, 1977, 1978; Barrera M., Barrera V. and López 1976, among others).

An increasing politization of practitioners in some areas of scientific research in Mexico, including ethnobotany, developed during the 1970s in response to what were perceived as diverse forms of repression prevalent at different levels of Mexican society. The subsequent reaction of many academics, including students and faculty, took the form of a radical reorientation in their concept of academic priorities. The political and social developments of the decade that affected academic spheres have been recently described by Toledo (n.d.; see also 1982).

Recent trends in Mexican ethnobotany can be viewed partially as a response to the obvious incongruities visible at all levels of society. Many investigators have contributed to the changing direction of ethnobotanical inquiry, toward the search for appropriate contexts within which scientific skill can be combined with socio-political consciousness: the goal being to design and carry out research that can return direct benefits to the sectors of society that share their knowledge and experience with the researcher, who, in turn, contributes it to science.

During the 1970s, "immersion" in the indigenous system was seen as a way in which an ethnobotanist could study traditional knowledge in its own cultural and historical context. Immersion refers here to extensive as well as intensive field

work in the community or region to be studied, incorporating what could essentially be described as an ethnographic approach to data collection through long-term residence. At the same time, it implies an *emic* approach to the study which transcends the observation of biological phenomena, to include relevant aspects of social organization, socio-economic and political variables, belief systems and the articulation of the local population with national level society, among others. Finally, it was felt that this approach to biological field work would provide insight into the needs of the community under study and thus facilitate the researcher's goals of reverting the products of his experience into the indigenous community (Toledo 1982). The ideal would be to develop indigenous consciousness and appreciation of their own values through educational programs which would stress the positive elements of their ethnobotanical and other traditions. At a less ambitious but no less ideal level, it has been argued that the recovery of traditional values among indigenous groups would aid them in their struggle for survival against the thrust of national society and the homogenizing process of Mexicanization.

At present, Mexican ethnobotany seems to be taking a somewhat more orthodox approach than in the 1970s to further its ends, insofar as methodology and the use of advanced technology is concerned. However, a different concept of ethnobotany motivates this research. Although the perceptions of what constitutes ethnobotany continue to reflect the concerns of particular research problems, the general concept is that of scientific activity which permits the acquisition and application of knowledge relevant to clearly defined problems which affect the most needy sectors of the population. To name a few: the development of nutritious and productive food plants based on the broad distribution of highly adaptive indigenous wild species; the recovery of traditional resource management techniques of varying scale, which can be introduced or re-introduced into areas where ecological deterioration has resulted from the application of short term intensification; the development of medicines and medical treatments based on indigenous techniques popularly recognized as superior to "modern" cures, and within the economic means of needy sectors of society.

In the political sphere, success has been limited and slow. Scientific development is a victim of administration, and has never been one of the national government's outstanding priorities. However, a maturation process, political as well as intellectual, is visible as increasingly more interdisciplinary research projects incorporate the diffusion of results at a popular level, with the hope of benefits that can affect the long-term improvement of living conditions of large sectors of the population.

Thus, the concept of contemporary ethnobotany in Mexico involves a deep commitment: to mobilize all of one's scientific and humanistic capacity toward the resolution of real problems that affect the population. Definitions will vary and the knowledge obtained will undoubtedly continue to reflect the researcher's theoretical and methodological orientation. The application of ethnobotanical knowledge, however, will depend upon the socio-economic level of the population, acculturation processes of the population in general, and the interests of the researcher himself.

C. EARLE SMITH, JR.:
CONTRIBUTIONS TO MEXICAN ETHNOBOTANY

Ethnobotany has undergone intense development during the past two decades. Similarly, its subdiscipline paleoethnobotany has become increasingly important. Not only are theoretical and quantitative concerns in the forefront, but also technological advances which expedite certain aspects of research, as well as its applications.

The research of C. Earle Smith, Jr. (Smitty) represents a significant contribution to Mexican ethnobotany. He was on familiar terms with a number of Mexican colleagues, although he apparently did not collaborate with them formally. Several paleoethnobotanists currently working in Mexico have worked with him at some stage in their training, and all have relied on his pioneering research in Mesoamerican archaeobotany. His studies of agricultural systems and traditional plant use are equally significant although lesser known. The importance of particular plant resources in the distant pre-hispanic past, the independent development of domesticated plants which form the basis of the traditional diet today, and the dimensions of prehistoric agricultural systems owe much of their recognition to his research. Needless to say, the majority of Mexican ethnobotanists are familiar with his published reports, particularly in relation to the archaeobotanical remains from the Tehuacan Valley. Time and again, his work is cited verbally or in print, although the published citations often refer to the editor of the volume in which his research appeared.

As an ethnobotanist often associated with some sort of "old school," Smitty had little time or interest in the development of armchair theory. An incessantly active individual, he took advantage of every opportunity to be in the field. His experience was, on the one hand, broad; and on the other, profound. Many of the published reports of his ethnobotanical as well as paleoethnobotanical research reveal this characteristic, although some readers are slow to grasp it. Some might criticize the apparent lack of detail in many of his descriptions, or the absence of quantitative analysis in most of them. I think these superficial shortcomings are the product of an impatience with the written word, an inadequate medium for the communication of ideas. At the same time, many of his brief statements carry a tightly-packed load of information.

On a more personal note, Smitty's most effective means of communication was verbal—in the classroom or laboratory, in the field, or over a quiet brown-bag lunch in his office. Interspersed with anecdotes collected over decades of study and travel, academic and otherwise, conversations touched on the most substantive theoretical issues in botany, ethnobotany, paleoethnobotany and ecology, among others. He possessed an innate desire to constantly increase his knowledge, and was privileged to possess a keen mind which assimilated immense quantities of information. I suspect that generations of students are able to recall these and other qualities which contributed to Smitty's charisma. His recognition of his own limitations is manifest in his intense training of students and encouragement of their use of new techniques for the recovery and analysis of ethnobotanical and paleoethnobotanical data, even though he himself did not consider more

sophisticated descriptive techniques to be as important as recovery and identification.

Though few Mexican researchers are aware of it, Smitty's orientation was totally congruent with the direction that ethnobotany has taken in Mexico. For example, a paper published in Mexico in 1978 reflects his awareness of the limitations of ethnobotanical studies which fail to consider social, economic and biological variables of the human populations which use the plants being studied.

CONCLUSION

Ethnobotany and its related areas of research make unusual demands upon scientists, partly because of its interdisciplinary character and, also, because of its link with social sciences and the personal commitment to society that research in the social sciences can and should imply. The degree of personal commitment in ethnobotanical research varies greatly among individuals and is manifest in the realm of individual conscience. The degree to which ethnobotany has developed in Mexico may not be representative of Latin America in general, but it is an appropriate response in its own context.

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